

Product Data

Flame Retardant Silicone Adhesive Sealant TSE3941-W

TSE3941-W is a one-component, non-corrosive, low volatile silicone adhesive sealant that cures on exposure to atmospheric moisture to form an elastic and flame retardant silicone rubber.

KEY FEATURES

- ◆ Fast tack-free time
- ◆ Flame retardant: UL94V-0 recognized (File No: E56745)
- ◆ Low volatility
- ◆ Excellent adhesion to many substrates
- ◆ Non-corrosive to metals
- ◆ Low odor cure: releases an alcohol vapor during cure

APPLICATIONS

- ◆ Flame retardant adhesive for high voltage parts
- ◆ Sealing of electrical and industrial applications required flame retardancy
- ◆ Connection sealing on electronic parts assemblies
- ◆ Waterproof sealant for electrical, electronic and communication equipment

TYPICAL PROPERTY DATA

(JIS K 6249)

UNCURED PROPERTIES		
Appearance		Non-flowable paste, white
Tack free time (23°C)	min	5
CURED PROPERTIES (3days @ 23°C, 50% RH)		
Appearance		White rubber
Density	g/cm ³	1.71
Hardness (Type A)		76
Tensile strength	MPa {kgf/cm ² }	4.2{43}
Elongation	%	80
Adhesion strength ^{*1}	MPa {kgf/cm ² }	2.0{20}
Volatile siloxane ^{*2} (D3-D10)	wt%	0.005
Thermal conductivity ^{*2}	W/(m·K) {cal/(cm·s·°C)}	0.7 {1.7×10 ⁻³ }

*1: Aluminum lap shear, 7days @ 23°C, 50% RH,

*2: In-house test method

These property data values should not be used as specifications.

ELECTRICAL PROPERTIES (Cure condition: 3days @ 23°C, 50% RH)

CONDITION	Volume resistivity $\Omega\cdot\text{cm}$	Dielectric strength kV/mm	Dielectric constant (60Hz)	Dielectric loss (60Hz)
Initial	2.3×10^{15}	21	4	0.04
500h @ 150°C,	7.2×10^{15}	23	-	-
1000h @ 150°C,	6.3×10^{15}	21	-	-
500h @ 60°C, 90%RH	2.1×10^{15}	22	-	-
16h in water	1.2×10^{15}	20	-	-

ADHESION PERFORMANCE

SUBSTRATE	NON PRIMER
Aluminum	○
Copper	○
Phenolic resin	○
Epoxy resin	○
PET	○
ABS resin	○
Polyamide	○
Polyphenylene ether	○
Polycarbonate	○*
Polyethylene	×
Polytetrafluoroethylene	×
Glass	○

○: Excellent (Cohesive failure) ×: Poor (Adhesive failure)

* It shows good adhesion but solvent crack may occur depending on the application. A preliminary adhesion test is recommended to confirm.

HEAT RESISTANCE (150°C)**LAP SHEAR ADHESION STRENGTH**

(unit: MPa)

SUBSTRATE	INITIAL	168h	500h
Copper	2.1	1.9	1.6
Epoxy resin	2.3	2.0	2.1
PET	1.9	1.7	1.7

HANDLING AND SAFETY

- ◆ Wear eye protection and protective gloves as required while handling the product.
- ◆ Maintain adequate ventilation in the work place at all times.

STORAGE

- ◆ Store in a cool dry place out of direct sunlight.
- ◆ Keep out of the reach of children.

PACKAGING

- ◆ 150 g tube available in cases of 20
- ◆ 333 ml cartridge available in cases of 50 (5 boxes of 10 cartridges)

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FOR INDUSTRIAL USE ONLY

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